

1 34. A method as described in claim 32 including:
2 before sputter depositing the seed layer, sputter depositing a bottom layer of SiO_2 so that
3 the seed layer is located between the bottom layer and the magnetic layer.

1 35. A method as described in claim 32 wherein the N_2O content in the second process
2 gas is from 2.4% to 4.0%.

1 36. A method as described in claim 35 wherein no bias is applied to the substrate.

1 37. A method as described in claim 36 including:
2 before sputter depositing the seed layer, sputter depositing a bottom layer of SiO_2 so that
3 the seed layer is located between the bottom layer and the magnetic layer.

1 38. A method as described in claim 37 wherein the seed layer is 25 \AA to 200 \AA thick.

1 39. A method as described in claim 38 wherein the bottom layer is about 25 \AA thick.

1 40. A method as described in claim 39 wherein four NiFeCo-O-N magnetic films are
2 deposited with each magnetic film being about 4500 \AA thick and each interlayer film being about
3 25 \AA thick.

REMARKS

Claims 1-40 remain in the application. Claims 1-18 have been withdrawn from consideration.

The Examiner has made a further restriction as follows:

"This elected group II contains claims directed to the following patentably distinct species of the claimed invention:

- Species I disclosed in CHART A with 1.8 μm thick NiFeCo-based laminates.
- Species II disclosed in CHART B with 0.15 μm thick NiFeCo-based laminates."

It should be noted that Species II, which is disclosed in CHART B, is not directed to laminates, but in contrast discloses single films.

As required by the Examiner the Applicant identifies the following claims within each species including the claims that are generic thereto.

Species I: Claims 19, 20, 21, 24 and 28-40

Species II: Claims 19, 20 and 24 which are all generic to Species II

Neither Species I or II: Claims 22, 23, 25, 26 and 27

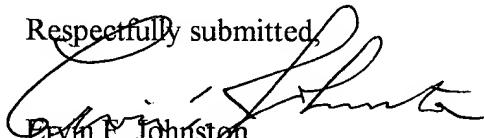
It should be noted that none of claims 22, 23, 25, 26 or 27 are directed to Species I or II as set forth by the Examiner. Claim 22 is directed to the open squares in Fig. 18, Fig. 23 is directed to the open squares in Fig. 19, Fig. 25 is directed to Example XV in Fig. 19, Claim 26, which is dependent upon claim 25, and claim 27, which is dependent upon claim 26, read upon the open squares and open triangles in Fig. 19. Under an assumption by the Applicant that the Examiner intended CHARTS A and B to set forth laminates and single films respectively without regard to thicknesses, claims 22, 23, 25, 26 and 27 would be identifiable under Species II.

The Examiner has incorrectly set forth CHART B as directed to laminates and under his present identification of Species I and II he has not provided sufficient species to include claims 22, 23, 25, 26 and 27. The Applicant respectfully requests that the Examiner clarify his restriction requirement.

The Applicant elects Species I claims 21 and 28-40 with claims 19, 20 and 24 being generic thereto.

Should the Examiner have any questions regarding this document he is respectfully requested to contact the undersigned.

Respectfully submitted,


Dennis F. Johnston
Reg. No. 20,490
Telephone: (619) 334-5883
Fax: (619) 448-1904

ATTACHMENT

Amend claims 21, 23, 25, 27 and 28.

1 21. (Once Amended) A method as described in claim 19 wherein the first process gas
2 includes 1.6% to 3.2% N₂O and [each of the NiFeCo-O-N films is about 4,500 Å thick.] the
3 magnetic layer includes multiple sputtered NiFeCo-O-N or NiFeCo-N films.

1 23. (Once Amended) A method as described in claim 19 wherein the first process gas
2 includes 1.0% to 2.0% N₂ and the magnetic layer [includes] is a single film 4,500 Å to 18,000 Å
3 thick.

1 25. (Once Amended) A method as described in claim 19 wherein the first process gas
2 is said inert gas and N₂ and the target is sputtered to form the magnetic layer of at least a single
3 film of NiFeCo-N about 1.8 μ m thick.

1 27. (Once Amended) A method as described in claim 26 wherein during sputtering
2 the first target, a pressure between 1×10^{-3} to 3×10^{-3} is maintained within said chamber and the
3 magnetic [film] layer comprises one or more films of NiFeCo-N from 4,500 Å to 18,000 Å thick.

1 28. (Once Amended) A method as described in claim 19 including:
2 the first process gas being said inert gas and N₂O;
3 sputter depositing multiple interlayer films of Al₂O₃ or SiO₂; and
4 [the first process gas is said inert gas and N₂O;]
5 sputtering the target multiple times to deposit multiple NiFeCo-O-N magnetic films;
6 and alternating the depositions to form the magnetic layer as a lamination of magnetic and
7 interlayer films.